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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,532	10/11/2005	Yasushi Hayashi	MAT-8748US	4368
53473	7590	12/03/2008		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER BAYOU, AMENE SETEGNE	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 12/03/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/552,532

**Applicant(s)**

HAYASHI, YASUSHI

**Examiner**

AMENE S. BAYOU

**Art Unit**

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 10/11/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 and its dependent claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 2 recites the limitation "the reverse leading groove of which first end communicates with the centrifugal pump ". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

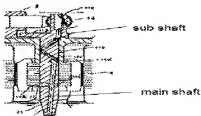
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1- 7 are rejected under 35 U.S.C. 103(a) as being as being unpatentable over Nobuo et al. (Japanese patent publication number S62-44108) in view of Goodnight (US patent number 6457561B1) further in view of Choi (US patent number 5971724).

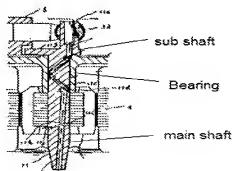
Art Unit: 3746

6 In re claim 1, Nobuo et al.' 108 disclose lubrication system for hermetic compressor including:

- Electric compressor ,in figure 1 and 2 ,comprising :a single phase induction motor (4) formed of stator and rotor
- A compressing mechanism (5) driven by the motor (4)
- A hermetic container (2) for accommodating the motor (4) and the compressing mechanism (2) and for pooling lubricant (7)
- A shaft having a main shaft and sub shaft (shown below)

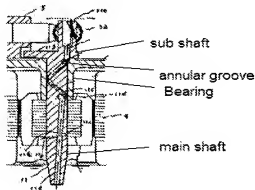


- A cylinder (5) for forming a compressing chamber
- A bearing (shown below) for supporting the main shaft



- A centrifugal pump (11) opening into the lubricant (7)

- A forward leading groove ( 11c) engraved on an outer wall of the main shaft and having a first end communicating with the centrifugal pump (11a) and a second end communicating with an annular lubricant groove (shown below) provided on an upper end of the bearing. Please also note that the applicant admitted the annular lubricant groove as prior art in page 1 line 24.



- A vertical hole (11f) bored in the sub shaft and having a first end communicating with the annular lubricant groove and a second end opening into the hermetic container .Nobuo et al.' 108,however fail to disclose the following limitation which is taught by Goodnight'561:
- Main shaft comprising a first section (32) having a first diameter and a second section (46) having a second diameter smaller than the first diameter, reverse leading groove (44) having a lead directing in an opposite direction to that of the forward leading groove (42),and having a first end ,in figure 7-9 and columns 3,line 39-50 and column 7,lines 7-11 . However,Nobuo et al.' 108 in view of Goodnight'561fail to disclose the following limitation which is taught by Choi '724:

- Leading groove (12) having a first end within the second section of the shaft (i.e. the smaller diameter portion of the shaft), clearly shown in figure 2 and 4.

7. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compressor of Nobuo et al.' 108 by adding a reverse leading groove as taught Goodnight'561 in order to ensure lubrication during reverse rotation of the compressor. Also since Nobuo et al.' 108 already disclosed forward leading groove having a first end communicating with the centrifugal pump and a second end communicating with an annular lubricant groove making the reverse leading groove second end communicating with an annular lubricant groove is a mere duplication. In addition It would have been obvious to one skilled in the art to locate the first end of the reverse leading edge in the smaller diameter section of the shaft as taught by Choi '724 since the outer area of the smaller diameter section of the shaft serves as an oil accumulator which facilitates pumping action. Please also note that Goodnight'561, in column 6, lines 17-20 teaches that the origin of the forward and reverse grooves can be at different locations and selecting the origin point would be obvious to one skilled in the art since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

8. In re claim 2 Nobuo et al.' 108 in view of Goodnight'561 further in view of Choi '724 as applied to claim 1 disclose the claimed invention:

Goodnight'561 discloses:

- The reverse leading groove (44) of which first end communicates with the centrifugal pump (36) via a thinner section (46) is formed at the intermediate section of the shaft, in figure 6.

Choi '724 discloses:

- The leading groove (62) of which first end communicates with the centrifugal pump (60) via a thinner section (smaller diameter section of the shaft (54)) is formed at the intermediate section of the shaft, in figure 4.

9. In re claim 3 and 6 Nobuo et al.' 108 in view of Goodnight'561 further in view of Choi '724 as applied to claim 1 disclose the claimed invention:

Goodnight'561 discloses:

- Crossectional area of the reverse leading groove is smaller than that of the forward leading groove, in column 7, lines 10-11 and line 35-38. Please note that such choice of different areas would be an obvious design choice in order to vary the flow rate in the forward and reverse leading grooves.

10. In re claim 4 and 7 Nobuo et al.' 108 in view of Goodnight'561 further in view of Choi '724 as applied to claim 1 disclose the claimed invention:

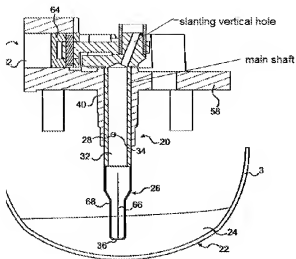
Goodnight'561 discloses:

- Lead of the reverse leading groove is greater than that of the forward leading groove in column 7, lines 10-11 and line 35-38.

11. In re claim 5 Nobuo et al.' 108 in view of Goodnight'561 further in view of Choi '724 as applied to claim 1 disclose the claimed invention:

Goodnight'561 discloses:

- A vertical hole slants with respect to a shaft center of the main shaft such that an upper section of the vertical hole slants outward, in figure 2.



### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1 -7, filed on September 25 2008 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amene S. Bayou whose telephone number is 571-270-3214. The examiner can normally be reached on Monday-Thursday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746